

REMARKS

Rejection of Claims 1-3, 6-15, 18-21, 26 and 27 Under 35 U.S.C. 102(b), or in the Alternative, Under 35 U.S.C. 103(a)

Claims 1-3, 6-15, 18-21, 26 and 27 have been rejected (Item 5, page 4, of Office Action of August 14, 1997) under 35 U.S.C. 102(b) "as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Stamler et al., WO 93/09806 (5/93)."

Claims 1-3 and 6-8 have been canceled.

According to the Declaration of Joseph Bonaventura, Ph.D., it is impossible to tell what reagent was used in the purported synthesis of SNO-hemoglobin in Example 19 of the cited reference Stamler et al., WO 93/09806. If the reagent had been S-nitroso-N-acetylcysteine (SNOAc) it would be impossible to detect SNO-hemoglobin by the method described. Figure 28 of WO 93/09806 is uninterpretable, but does not resemble the spectrum of any form of hemoglobin. The spectra shown in Figure 29 of WO 93/09806 indicate that oxyhemoglobin is being converted to methemoglobin, contrary to the conclusion presented in the text of Example 19, that SNOAc does not react in a redox reaction with the metal centers of hemoglobin. Therefore, according to the Declaration of Joseph Bonaventura, Ph.D., one of ordinary skill in the art could not use the description provided in WO 93/09806 to make any form of SNO-hemoglobin.

Rejection of Claims 1-27 Under 35 U.S.C. § 103(a)

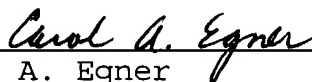
Claims 1-27 have been rejected (Item 6, page 6 of Office Action of August 14, 1997) under 35 U.S.C. § 103(a) as being "unpatentable over Stamler et al., in view of Feola et al., U.S. Patent No. 5,439,882 ..., Klatz et al., U.S. Patent No. 5,395,314 ... and Hunter, U.S. Patent No. 5,152,979 (10/92)." Claims 1-3 and 6-8 have been canceled.

As in the rejection of Claims 1-3, 6-15, 18-21, 26 and 27 discussed above, the Examiner has cited Stamler et al., WO 93/09806 as the primary reference in the rejection. As discussed above, WO 93/09806 cannot be interpreted as presenting an enabling description for any form of SNO-hemoglobin, according to the Declaration of Joseph Bonaventura, Ph.D. Feola et al. report a cross-linked mammalian hemoglobin, not modified in any way to add NO groups. Neither Klatz et al. nor Hunter et al. teach or suggest any form of hemoglobin. The Feola, Klatz and Hunter references, taken together, cannot teach or suggest SNO-hemoglobins, compositions comprising SNO-hemoglobins, or methods for making and using SNO-hemoglobins.

CONCLUSION

The Examiner is respectfully requested to consider the Declaration of Joseph Bonaventura, Ph.D. Under 37 C.F.R. § 1.132 and the above remarks, in addition to the remarks in the Amendment mailed to the United States Patent and Trademark Office on February 17, 1998, and to reconsider and withdraw the rejections. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned at (781) 861-6240.

Respectfully submitted,

  
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